UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,912	01/17/2002	Yong-Jun Lim	Q67327	3408

7590 06/15/2005

SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, NW
Washington, DC 20037-3213

EXAMINER	
SHAW, PELING ANDY	
ART UNIT	**PAPER NUMBER**
2144	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/046,912	LIM, YONG-JUN	
	Examiner	Art Unit	
	Peling A. Shaw	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9 and 10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9 and 10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Amendment received on 03/15/2005 has been entered. Claims 1, 4, 7 and 9 are currently amended. Claims 2-3, 5-6 and 10 are original. Claims 8 and 11-13 are canceled.

2. Claims 1-7 and 9-10 are presented for examination.

Priority

3. This application claims a priority # Republic of Korea 2001-38804 on 06/30/2001. The filing date is 01/17/2002.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-7 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Nelson, et al., (US 5568641 A), hereinafter referred as Nelson.

a. Regarding claim 1, Nelson disclosed (in abstract, line 6-14 and 18-20, column 2, line 22-40, Fig. 1A and Fig. 2) a network device (system) capable of upgrading software, comprising monitoring means (powerfail), a first memory (boot block), a second memory (new firmware), a controller (microprocessor), and a decoder.

b. Regarding claim 2, Nelson disclosed (column 2, line 22-29) the controller provides a control signal to the decoder to copy the old version of the software to the empty area of the first memory (alternate boot block), erase the old version of the software stored in an original area of the first memory (primary boot block), and copy the information stored in the second memory (new firmware) to the original area of the first memory (primary boot block).

c. Regarding claim 3, Nelson disclosed (column 2, line 33-37) monitoring means on power failure or hang-up (powerfail).

d. Regarding claim 5, Nelson disclosed (column 2, line 15-19 and 23-28) the decoder and monitoring means detects one failure (powerfail) and returns to the initial state (alternate boot block) of the network device.

e. Regarding claim 6, Nelson disclosed (column 2, line 15-19 and 23-28) the decoder operates that the network device can be restarted (non-volatile memory bit) based on the old version of the software (alternate boot block containing the old primary boot information).

f. Regarding claim 7, Nelson disclosed (in abstract, line 6-14 and 18-20, column 2, line 22-40, Fig. 1A and Fig. 2) a network device (system) capable of upgrading software, comprising monitoring means (powerfail), a first memory (primary boot block), a second memory (alternate boot block), a third memory (new firmware), a controller (microprocessor), and a decoder.

g. Regarding claim 9, Nelson disclosed (Fig. 2, items 75 and 80, column 1, line 35-47, column 2, line 1-4, 15-19 and 22-29) checking one failure (powerfail)

during the upgrade, to operate according to the new software or old software based (non-volatile memory bit) upon if a failure occurs, downloading the new version of the software through the network and storing the new version of the software in a second memory of the network device (downloading the code to the EEPROM), copying the old version of software (old boot firmware) in a first area (primary boot block) to a second area (alternate boot block), erasing the old software in the first area, storing the new software (new firmware) in the first area.

h. Regarding claim 10, Nelson disclosed (column 2, line 33-37) checking (powerfail) during erasing and storing steps.

Nelson disclosed all limitations of claims 1-3, 5-7 and 9-10. Claims 1-3, 5-7 and 9-10 are rejected under 35 U.S.C. 102(b).

5. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(a) as being anticipated by MITSUI, HITOSHI, (JP 2001117780 A), hereinafter referred as MITSUI.

a. Regarding claim 1, MITSUI disclosed (in abstract, line 1-10) a network device (information storage device) capable of upgrading software, comprising monitoring means (accident due to update), a first memory (first flash PROM0), a second memory (second flash PROM1), a controller (information storage device), and a decoder (storage device).

b. Regarding claim 4, MITSUI disclosed (in abstract, line 1-10) the further monitoring means on failure in the network (download method).

c. Regarding claim 5, MITSUI disclosed (in abstract, line 1-10) the decoder and monitoring means detects one failure (accident due to download) and returns to the initial state (read from flash PROM0) of the network device.

d. Regarding claim 6, MITSUI disclosed (in abstract, line 1-10) the decoder operates that the network device can be restarted (accident in a short time) based on the old version of the software (read from flash PROM0).

MITSUI disclosed all limitations of claims 1 and 4-6. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(a).

6. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by MATSUI et al., (JP 09138769 A), hereinafter referred as MATSUI.

a. Regarding claim 1, MATSUI disclosed (in abstract, line 1-17) a network device (client) capable of upgrading software, comprising monitoring means (file judging means), a first memory (the old version in an original space on a disk), a second memory (the replacement software, the delivered software), a controller (server), and a decoder (software recovering means).

b. Regarding claim 4, MATSUI disclosed (in abstract, line 9-10) the further monitoring means on failure in the network (the failure of delivery).

c. Regarding claim 5, MATSUI disclosed (in abstract, line 1-10) the decoder and monitoring means detects one failure (the failure of delivery) and returns to the initial state (software recover) of the network device.

d. Regarding claim 6, MATSUI disclosed (in abstract, line 9-17) the decoder operates that the network device can be restarted (software recovering

instructing means) based on the old version of the software (return the software into the original state before delivery).

MATSUI disclosed all limitations of claims 1 and 4-6. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b).

7. Claims 1-3, 5-7 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by TAKEO, KAZUNORI, (JP 10105407 A), hereinafter referred as TAKEO.

a. Regarding claim 1, TAKEO disclosed (in abstract, line 1-16) a network device (central processing part) capable of upgrading software, comprising monitoring means (fault monitoring part), a first memory (back-up memory and part of operation memory), a second memory (part of operation memory), a controller (autonomous program fault restoring system), and a decoder (storage part).

b. Regarding claim 2, TAKEO disclosed (in abstract, line 6-16) the controller provides a control signal to the decoder to copy the old version of the software to the empty area of the first memory (back-up memory), erase the old version of the software stored in an original area of the first memory (operation memory), and copy the information stored in the second memory (down-load program) to the original area of the first memory (operation memory).

c. Regarding claim 3, TAKEO disclosed (in abstract, line 4-5) monitoring means on power failure or hang-up (fault occurs due to the program).

d. Regarding claim 5, TAKEO disclosed (in abstract, line 1-10) the decoder and monitoring means detects one failure (fault occurs due to the program) and returns to the initial state (software recover) of the network device.

e. Regarding claim 6, TAKEO disclosed (in abstract, line 3-5 and 10-12) the decoder operates that the network device can be restarted based on the old version of the software (transfer operation program preserved in back-up memory).

f. Regarding claim 7, TAKEO disclosed (in abstract, line 11-33) a network device capable of upgrading software, comprising monitoring means, a first memory (part of operation memory), a second memory (back-up memory), a third memory (part of operation memory), a controller, and a decoder.

g. Regarding claim 9, TAKEO disclosed (in abstract, line 1-11) checking one failure (fault occurs due to the program) during the upgrade, to operate according to the new software (down-loaded program is executed) or old software based upon (restarting) if a failure occurs, downloading the new version of the software through the network and storing the new version of the software in a second memory of the network device (back-up memory), copying the old version of software in a first area (part of operation memory) to a second area (preserved in a back-up memory), erasing the old software in the first area, storing the new software in the first area.

h. Regarding claim 10, TAKEO disclosed (in abstract, line 9-13) checking (abnormality) during erasing and storing steps.

TAKEO disclosed all limitations of claims 1-3, 5-7 and 9-10. Claims 1-3, 5-7 and 9-10 are rejected under 35 U.S.C. 102(b).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson, et al., (U.S. Patent Number 5,568,641), hereinafter referred as Nelson as applied to claims 1 above, and further in view of Kurihara, Nobumasa, (JP411328040A), hereinafter referred as Kurihara.

a. Nelson shows (in abstract, line 6-14 and 18-20, column 2, line 22-40, Fig. 1A and Fig. 2) a network device (system) capable of upgrading software, comprising monitoring means (powerfail), a first memory (boot block), a second memory (new firmware), a controller (microprocessor), and a decoder. Nelson does not show the monitoring means on failure in the network. However, Nelson does show the consideration of both power failure and other disruption during the firmware upgrade.
b. Kurihara shows (in abstract, line 3-5) the monitoring means on failure in the network (download fault from higher order station to base station) in an analogous art for the purpose of memory readout control.
c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Nelson's functions of powerfail durable

flash EEPROM upgrade to include Kurihara's functions of checking download fault.

d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to include the network failure consideration in the download phase of firmware (or any software) upgrading per Kurihara's teaching to facilitate a better upgrade process management.

Together Nelson and Kurihara disclosed all limitations of claim 4. Claim 4 is rejected under 35 U.S.C. 103(a).

Response to Arguments

9. Applicant's arguments filed on 03/15/2005 have been fully considered, but they are not persuasive.

10. In response to applicant's statement of "However, assuming, arguendo, Nelson discloses an upgrade involving new firmware, nowhere does Nelson even mention a second memory, constituting a network device, for storing information transferred through the network." Nelson disclosed "upgrade firmware by downloading the code to the EEPROM" (column 1, line 35-column 2, line 4) and "After the primary boot block 0 is erased 75, it is subsequently upgraded (burned and/or written to) with new boot firmware 80." (column 5, line 44-47). It proves that the new firmware information must be held in a memory place. Since the EEPROM per Nelson is intended to hold boot image per Nelson (column 5, line 58-column 6, line 61), the new firmware information must be held in a separate memory place other than in EEPROM. It is well known to a person of ordinary skill in the art at the time, a device with processor does not only have an EEPROM. It must have other memory means for processor execution.

11. In response to applicant's statement of "decode" is not "decoder" in Fig. 1, a person of ordinary skill in the art at the time knows the box of "decode" in Fig. 1 means "decoder". It is also well known to a person of ordinary skill in the art at the time that a decoder is used to select memory and specify the address used for processor execution, including boot.

12. In response to applicant's statement of "nowhere does Nelson mention a network device, and certainly does not mention a network device comprising the

claimed monitoring means", Nelson disclosed the download and upgrade of firmware (column 1, line 35- column 2, line 4) and "After the primary boot block is erased, if a disruptive event or powerfail were to occur, the upgrade could not be completed if block 2 were not addressable as an alternate boot block by processor 20" (column 5, line 29-43).

13. In response to applicant's statement of "Nelson does not teach copying, copy the information stored in the second memory to the original area of the first memory" as recited in claim 2.", Nelson disclosed "After the primary boot block 0 is erased 75, it is subsequently upgraded (burned and/or written to) with new boot firmware 80. Upon completion of the upgrade of the primary boot block, nvmembit 40 is reset 85 to its first (logical 0) state to cause the primary boot block to appear back in its proper address space." (Fig. 2, items 80 and 85, column 5, line 44-47).

14. In response to applicant's statement with respect independent claims 7 and 9, section 11 above is applied. The first, second and third memories are mapped in the action.

15. In response to applicant's statement with respect independent claim 10, Nelson disclosed "Returning again to FIG. 2, after the nvmembit is set 70, the primary boot block 0 is erased 75. After the primary boot block is erased, if a disruptive event or powerfail were to occur, the upgrade could not be completed if block 2 were not addressable as an alternate boot block by processor 20." It is also well known to a person of ordinary skill in the art at the time that a device designer would have to

consider a faulty condition, especially a powerfail or any other disruptive event, including a network fail, e.g. during download per Nelson's teaching.

16. In response to application's statements with respect to the rejections over Jung, the request for removal of Jung as a prior art reference is noted. However, the NPL showing the original Korea application's action in regarding Jung by Korean Industrial Property Office will be kept.

17. In response to application's statements with respect Mitsui, Matsui and Takeo, the applied arts are read per their teaching, not word by word. The action does map the teaching to the claimed invention as above.

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

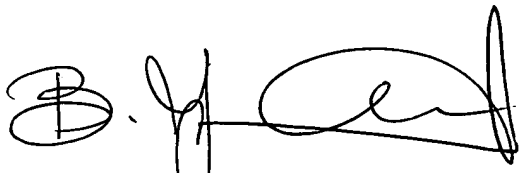
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peling A. Shaw whose telephone number is (571) 272-7968. The examiner can normally be reached on M-F 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571)272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the statu9s of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

pas



BUNJOB JAROENCHONWANIT
PRIMARY EXAMINER